

Prevalence and factors associated with peristomal skin complications: a cross-sectional study **

Izabelita Alves de Araújo¹ , Cibelle Samilly Santana Cruz² ,
Jamilly Alves dos Santos² , Ana Cristina Freire Abud³ , Caíque Jordan Nunes Ribeiro^{1*} 

ABSTRACT

Objective: To assess the prevalence and factors associated with peristomal skin complications among people with elimination ostomies attending a rehabilitation center in northeastern Brazil. **Methods:** A cross-sectional, analytical survey with a quantitative approach was conducted. Clinical and epidemiological data were collected through in-person or telephone interviews from February to August 2024 using an instrument developed based on the literature. The outcome was self-reported peristomal skin complications during the previous six months. **Results:** The study included 302 participants, most of whom were women and had temporary colostomies due to neoplasms. The prevalence of peristomal skin complications was 66.5%. Age older than 50 years, self-reported adaptation to the ostomy, and engagement in physical activity were each significantly associated with a 21% lower prevalence of the outcome. **Conclusion:** Peristomal skin complications affected two-thirds of the sample and were less prevalent among people older than 50 years, those who reported being adapted to their ostomy, and those who engaged in physical activity. These predictors support the planning of nursing interventions. The importance of consultation with a stomatherapy nurse from the preoperative period onward and of educational strategies focused on self-care is reaffirmed to support hospital discharge and the adaptation period. Future longitudinal studies are recommended to allow the examination of cause-and-effect relationships.

KEYWORDS: Colostomy. Urinary diversion. Enterostomal therapy. Ostomy. Prevalence.

Prevalência e fatores associados a complicações de pele periostomia: estudo transversal

RESUMO

Objetivo: Avaliar a prevalência e os fatores associados a complicações de pele periostomia em pessoas com estomias de eliminação de um centro de reabilitação no Nordeste brasileiro. **Métodos:** Pesquisa do tipo inquérito, transversal, analítica e quantitativa. Coletaram-se dados clínico-epidemiológicos por meio de entrevistas (presenciais ou telefônicas), de fevereiro a agosto de 2024, utilizando instrumento elaborado com base na literatura. O desfecho foi o autorrelato de complicações periostomia nos últimos seis meses. **Resultados:** Participaram 302 pessoas, predominantemente mulheres, com colostomias temporárias decorrentes de neoplasias. A prevalência de complicações de pele periostomia foi de 66,5%. Idade acima de 50 anos, sentir-se

¹Universidade Federal de Sergipe  – São Cristóvão (SE), Brazil.

²Universidade Federal de Sergipe  – Lagarto (SE), Brazil.

³Universidade Federal de Sergipe  – Aracaju (SE), Brazil.

*Corresponding author: caiquejordan@academico.ufs.br

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adaptado à estomia e praticar atividade física associaram-se significativamente à prevalência 21% menor do desfecho. **Conclusão:** As complicações periestomias atingiram dois terços da amostra, sendo menos frequentes em idosos, indivíduos adaptados e praticantes de atividade física. Esses preditores fundamentam o planejamento de intervenções de enfermagem. Reitera-se a relevância da consulta com enfermeiro estomaterapeuta desde o pré-operatório e de estratégias educativas voltadas ao autocuidado, visando à alta hospitalar e ao período de adaptação. Recomendam-se estudos longitudinais futuros que possibilitem a análise de causa e efeito.

DESCRIPTORES: Colostomia. Derivação urinária. Estomaterapia. Estomia. Prevalência.

Prevalencia y factores asociados con las complicaciones de la piel periestomal: estudio transversal

RESUMEN

Objetivo: Evaluar la prevalencia y los factores asociados a las complicaciones de la piel periestomal en personas con estomas de eliminación de un centro de rehabilitación en el noreste brasileño. **Métodos:** Estudio de tipo encuesta, transversal, analítico y cuantitativo. Se recolectaron datos clínico-epidemiológicos mediante entrevistas (presenciales o telefónicas), de febrero a agosto de 2024, utilizando un instrumento elaborado a partir de la literatura. El desenlace principal fue el autorreporte de complicaciones periestomales en los últimos seis meses. **Resultados:** Participaron 302 personas, predominantemente mujeres, con colostomías temporales derivadas de neoplasias. La prevalencia de complicaciones de la piel periestomal fue del 66,5%. La edad superior a 50 años, sentirse adaptado al estoma y practicar actividad física se asociaron significativamente con una prevalencia un 21% menor del desenlace. **Conclusión:** Las complicaciones periestomales afectaron a dos tercios de la muestra, siendo menos frecuentes en personas mayores de 50 años, individuos adaptados y practicantes de actividad física. Estos predictores fundamentan la planificación de intervenciones de enfermería. Se reitera la relevancia de la consulta con el enfermero estomaterapeuta desde el preoperatorio y de estrategias educativas orientadas al autocuidado, con miras al alta hospitalaria y al período de adaptación. Se recomiendan futuros estudios longitudinales que permitan el análisis de causa y efecto.

DESCRIPTORES: Colostomía. Derivación Urinaria. Estomaterapia. Estomía. Prevalencia.

INTRODUCTION

The surgical creation of ostomies is an essential procedure to ensure continuity of life, allowing for the maintenance of breathing, nutrition, or elimination in clinical situations in which individuals are unable to meet their basic needs physiologically¹. However, approximately 70% of people with an ostomy develop complications, increasing morbidity during the postoperative period².

The global prevalence of people with ostomies may reach up to 0.1% of the world's population, according to the World Health Organization (WHO), which underscores the need to develop public policies for this population. In Canada, which has various funding mechanisms, resources have not been sufficient for most people with ostomies. Approximately 75% of individuals reported having been forced to choose between purchasing ostomy supplies and paying for other daily expenses, such as food or prescription medications^{3,4}.

In Portugal, a law regulating the control of and equitable access to products used by people with ostomies was enacted only in 2017. Dispensing is carried out through community pharmacies, which are fully reimbursed by the Portuguese National Health Service⁵. In Brazil, in turn, the public healthcare system has guaranteed access to ostomy collection appliances since 2008⁶.

Approximately 400,000 people live with ostomies in Brazil⁷. In 2021, approximately 7,000 surgical procedures for the creation of colostomies were authorized by the Brazilian Unified Health System (SUS). The Southeast region had the highest prevalence, accounting for 46.7% of cases⁸. In Sergipe, more than 1,000 people live with elimination ostomies, and during the data collection period, approximately 30 new admissions per month were recorded at the Specialized Center for Physical, Intellectual, and Autism Spectrum Disorder, Hearing, and Visual Rehabilitation (CER).

The creation of an ostomy entails various care and adaptation needs, including peristomal skin care, as lesions in this region are highly prevalent and significantly impair quality of life. In a sample of 202 American adults, most participants were found to have peristomal skin irritation and leakage, which exposes the skin to ostomy effluent and may cause moisture-associated dermatitis⁹.

Most cases of dermatitis occur within the first five years after surgery, with a clinical spectrum ranging from mild forms (erythema) to severe forms (ulcerations)¹⁰. Considering this aspect, the study aimed to characterize the clinical and epidemiological profile, analyze the prevalence of self-reported complications, and identify the associated factors. Assessment of these patient-centered variables is essential to support decision-making by stomatherapy nurses and, consequently, improve the quality of nursing care provided to patients.

OBJECTIVES

To assess the prevalence and factors associated with peristomal skin complications in people with elimination ostomies at a specialized rehabilitation center in northeastern Brazil.

METHODS

Study Design and Setting

This was a cross-sectional, analytical survey study with a quantitative approach, conducted at the Ostomy Care Service (SASPO) of a CER in a capital city in northeastern Brazil. The study was guided by the *Strengthening the Reporting of Observational Studies in Epidemiology* (STROBE) guidelines¹¹.

Population and Sample

Data collection was conducted from February to August 2024. Initially, a total of 1,276 registered users were identified, from which individuals younger than 18 years (n=95) and incarcerated individuals (n=18) were excluded, resulting in a population of 1,163 people.

The sample size calculation, based on the Barbetta (2004) method for finite populations with a tolerable error of 5%, indicated a minimum requirement of 298 participants¹².

During the recruitment phase involving the entire population, additional exclusion criteria were applied for cognitive, hearing, or motor impairments that prevented, respectively, understanding the questionnaire or performing self-care. These conditions were identified by the researchers based on information provided by participants and family members during the initial contact, resulting in the exclusion of these individuals from the final sample.

In-person data collection was hampered by the absence of most users with ostomies from the service, as they usually delegate the collection of supplies to their primary caregiver, family member, or legal guardian. As an alternative, telephone interviews were conducted, a strategy that facilitated broader sample coverage and the inclusion of participants residing in all health regions.

The final sample consisted of 302 participants, including 173 telephone interviews and 129 in-person interviews, exceeding the initial statistical parameter and ensuring a 95% confidence level for the study.

Data Collection Instrument

A researcher-developed questionnaire based on the literature was used to assess the clinical and epidemiological profile, with items encompassing socioeconomic, demographic, and clinical data, as well as information on ostomy care, surgical reversal, and the dispensing of supplies.

For participants who reported being unfamiliar with the complications under investigation, a verbal description was provided to ensure understanding of the terms, using standardized materials to explain them. A pilot test was conducted with ten participants (whose data were excluded from the final analysis), which allowed for refinement and calibration of the instrument.

Study Variables

The study outcome was self-reported peristomal skin complications occurring within the previous six months. Participants were instructed to answer, using dichotomous questions (yes/no), whether they had experienced any of the following signs or symptoms during this period: itching, pain, burning sensation, erythema, ulceration, dryness, or maceration. A researcher-developed questionnaire was used to investigate the predictor variables related to socioeconomic, demographic, and clinical characteristics, ostomy care, and access to healthcare services, as presented in the results.

Data Analysis

The data were stored in electronic spreadsheets generated using the Research Electronic Data Capture (REDCap) system and exported to Microsoft Excel® and subsequently to IBM SPSS® version 27.0 for descriptive and inferential statistical analyses.

For the descriptive analysis, an exploratory analysis of the data was performed, and the symmetry of the distribution of quantitative data was assessed using the Shapiro-Wilk test. Categorical variables were presented as absolute and relative frequencies. Quantitative variables were described using measures of central tendency (mean and median) and dispersion (standard deviation and quartiles).

A bivariate analysis was performed using Pearson's chi-square test to select variables eligible for inclusion in the multivariable model, with $p < 0.20$. Additionally, crude prevalence ratios (PRs) with their respective 95% confidence intervals (95% CIs) were calculated to measure the strength and direction of the association between the outcome and its predictor variables when the frequency of the outcome of interest was $> 10\%$.

To identify factors independently associated with the outcome of interest, a multivariable regression model was developed. To calculate the adjusted PRs (aPRs) and their respective 95% CIs, a generalized linear Poisson regression model with a log-linear link function, hybrid parameter estimation method, robust variance estimator, and Type III analysis for testing model effects was used.

The Akaike Information Criterion (AIC), deviance, and log-likelihood parameters were used as references for selecting the best-fitting model, with lower values for these parameters indicating better model fit. The significance of the estimates of the variables included in the final model was assessed using the Wald chi-square test. Variables with $p < 0.05$ in the final model were considered statistically significant.

Ethical Considerations

The study followed the ethical principles of the Declaration of Helsinki, Good Clinical Practices: Document of the Americas, and Resolutions No. 466/2012 and No. 510/2016 of the Brazilian National Health Council. Laws No. 13,709/2018 and No. 14,874/2024 were also followed. The study commenced after approval by the Human Research Ethics Committee of the Federal University of Sergipe (Approval No. 6,590,416).

RESULTS

The final study sample consisted of 302 participants, with most interviews conducted by telephone (173; 57.3%), with an average of 50 interviews conducted per month. The prevalence of peristomal skin complications during the previous six months was 66.5% (n=201), as evidenced by self-reported signs and symptoms: itching (152; 50.3%); erythema (135; 44.7%); burning sensation (87; 28.8%); ulceration (77; 25.5%); pain (45; 14.9%); maceration (38; 12.6%); and dryness (33; 10.9%).

The predominant sociodemographic characteristics among participants were: female sex (157; 52.0%), age over 50 years (180; 59.6%), fewer than 12 years of formal education (256; 84.8%), non-White skin color (239; 79.1%), having a partner (153; 50.7%), residing in an urban area (244; 80.8%), residing in the metropolitan region (171; 56.6%), family income of at least one minimum wage (245; 81.1%), no access to private health insurance (239; 79.1%), not receiving government benefits (222; 73.5%), having internet access (243; 80.5%), and having a religious belief (278; 92.1%) (Table 1).

Table 1. Sociodemographic characteristics of people with intestinal elimination ostomies, Aracaju, Sergipe, Brazil, 2024.

Variables		PSC during the previous six months				Total (n=302)		p-value
		Yes (n=201)		No (n=101)				
		n	%	n	%	n	%	
Age (years)	≤50	93	76.2	29	23.8	122	40.4	0.003
	>50	108	60.0	72	40.0	180	59.6	
Education (years)	<12	169	66.0	87	34.0	256	84.8	0.638
	≥12	32	69.6	14	30.4	46	15.2	
Skin color	White	40	63.5	23	36.5	63	20.9	0.562
	Non-White	161	67.4	78	32.6	239	79.1	
Marital status	With partner	104	68.0	49	32.0	153	50.7	0.597
	Without partner	97	65.1	52	34.9	149	49.3	
Region of residence	Metropolitan Region	115	67.3	56	32.7	171	56.6	0.770
	Inland region	86	65.6	45	34.4	131	43.4	
Area of residence	Urban	167	68.4	77	31.6	244	80.8	0.154
	Rural	34	58.6	24	41.4	58	19.2	
Biological sex	Male	97	66.9	48	33.1	145	48.0	0.904
	Female	104	66.2	53	33.8	157	52.0	
Gender identity	Cisgender	199	66.6	100	33.4	299	99.0	1.000
	Transgender	2	66.7	1	33.3	3	1.0	
Family income ≥1 (minimum wage)	Yes	164	66.9	81	33.1	245	81.1	0.464
	No	27	73.0	10	27.0	37	12.3	
Has health insurance	Yes	45	71.4	18	28.6	63	20.9	0.357
	No	156	65.3	83	34.7	239	79.1	
Receives government benefits	Yes	56	70.0	24	30.0	80	26.5	0.446
	No	145	65.3	77	34.7	222	73.5	
Has internet access	Yes	171	70.4	72	29.6	243	80.5	0.004
	No	30	50.8	29	49.2	59	19.5	
Has religious beliefs	Yes	184	66.2	94	33.8	278	92.1	0.822
	No	17	70.8	7	29.2	24	7.9	

PSC: Peristomal skin complications; MW: minimum wage.

*Missing data = 20

Source: The authors.

Table 2 presents the clinical characteristics, lifestyle habits, and health-promoting practices of the participants. Most respondents rated their health status as good or excellent (180; 59.6%), did not have hypertension (210; 69.5%) or diabetes mellitus (247; 81.8%), and did not report alcohol consumption (247; 81.8%) or smoking (276; 91.4%). Most engaged in leisure activities (153; 50.7%) but did not participate in a therapeutic support group or association (251; 83.1%). In addition, most were not sexually active (154; 51.0%), did not swim in the ocean or a pool (182; 60.3%), and did not engage in physical activity (205; 67.9%). Regarding follow-up with the multidisciplinary team, most participants received care from a specialist physician (209; 69.2%) and a nurse (157; 52.0%).

Table 2. Clinical characteristics, lifestyle habits, and health-promoting practices of people with intestinal elimination ostomies, Aracaju, Sergipe, Brazil, 2024.

Variables		PSC during the previous six months				Total (n=302)		p-value
		Yes (n=201)		No (n=101)				
		n	%	n	%	n	%	
Arterial hypertension	Yes	57	62.0	35	38.0	92	30.5	0.262
	No	144	68.6	66	31.4	210	69.5	
Diabetes mellitus	Yes	31	56.4	24	43.6	55	18.2	0.076
	No	170	68.8	77	31.2	247	81.8	
Consumes alcohol	Yes	35	63.6	20	36.4	55	18.2	0.612
	No	166	67.2	81	32.8	247	81.8	
Smoking	Yes	17	65.4	9	34.6	26	8.6	0.895
	No	184	66.7	92	33.3	276	91.4	
Follow-up with a specialist physician	Yes	140	67.0	69	33.0	209	69.2	0.813
	No	61	65.6	32	34.4	93	30.8	
Follow-up with a nurse	Yes	104	66.2	53	33.8	157	52.0	0.904
	No	97	66.9	48	33.1	145	48.0	
Participates in a group or association of people with ostomies	Yes	30	58.8	21	41.2	51	16.9	0.199
	No	171	68.1	80	31.9	251	83.1	
Has an active sex life	Yes	102	68.9	46	31.1	148	49.0	0.394
	No	99	64.3	55	35.7	154	51.0	
Engages in leisure activities	Yes	99	64.7	54	35.3	153	50.7	0.490
	No	102	68.5	47	31.5	149	49.3	
Has gone or would go swimming at the beach or in a pool	Yes	80	66.7	40	33.3	120	39.7	0.974
	No	121	66.5	61	33.5	182	60.3	
Engages in regular physical activity	Yes	54	55.7	43	44.3	97	32.1	0.006*
	No	147	71.7	58	28.3	205	67.9	
How do you rate your health status?	Excellent	22	53.7	19	46.3	41	13.6	0.065
	Good	89	64.0	50	36.0	139	46.0	
	Fair	73	70.9	30	29.1	103	34.1	
	Poor	10	90.9	1	9.1	11	3.6	
	Very poor	7	87.5	1	12.5	8	2.6	

PSC: Peristomal skin complications.
Source: The authors.

Table 3 describes the clinical, surgical, and care-related characteristics associated with ostomy creation. Neoplasms were the primary diagnosis leading to ostomy creation (172; 57.0%). Most participants had had their ostomy for up to five years (220; 72.8%). Colostomy was the most prevalent type of ostomy (201; 66.6%), as were temporary ostomies (181; 59.9%). Regarding perioperative aspects, ostomy creation was performed during emergency surgery (184; 60.9%), and preoperative stoma site marking was not performed (246; 81.5%). Although most participants reported receiving postoperative instructions (220; 72.8%), a large proportion did not feel confident performing self-care at the time of hospital discharge (201; 66.6%).

Table 3. Clinical, surgical, and care-related characteristics associated with ostomy creation, Aracaju (SE), 2024.

Variables		PSC during the previous six months				Total (n=302)		p-value
		Yes (n=201)		No (n=101)				
		n	%	N	%	n	%	
Diagnosis for ostomy indication	Neoplasm	115	66.9	57	33.1	172	57.0	0.591
	Trauma	26	74.3	9	25.7	35	11.6	
	IBD	11	61.1	7	38.9	18	6.0	
	Others	46	65.7	24	34.3	70	23.2	
	Unknown	3	42.9	4	57.1	7	2.3	
Time since ostomy creation (years)	<1	76	75.2	25	24.8	101	33.4	0.036
	1 to 5	78	65.5	41	34.5	119	39.4	
	>5	47	57.3	35	42.7	82	27.2	
Type of ostomy	Colostomy	139	69.2	62	30.8	201	66.6	0.152
	Ileostomy	30	73.2	11	26.8	41	13.6	
	Undefined intestinal ostomy	22	55.0	18	45.0	40	13.2	
	Urostomy	8	47.1	9	52.9	17	5.6	
	Double ostomy (intestinal and urinary)	2	66.7	1	33.3	3	1.0	
Type of ostomy by duration	Permanent	62	56.4	48	43.6	110	36.4	0.014
	Temporary	132	72.9	49	27.1	181	59.9	
	Unknown	7	63.6	4	36.4	11	3.6	
Type of surgery	Elective	77	65.3	41	34.7	118	39.1	0.796
	Emergency	124	67.4	60	32.6	184	60.9	
Preoperative stoma site marking	Yes	31	55.4	25	44.6	56	18.5	0.049
	No	170	69.1	76	30.9	246	81.5	
Received postoperative guidance	Yes	148	67.3	72	32.7	220	72.8	0.666
	No	53	64.6	29	35.4	82	27.2	
Felt confident at discharge for self-care	Yes	60	59.4	41	40.6	101	33.4	0.062
	No	141	70.1	60	29.9	201	66.6	

PSC: Peristomal skin complications; IBD: inflammatory bowel disease.
Source: The authors.

Table 4 presents the main non-dermatological complications: allergic reactions to ostomy appliances and accessories (84; 27.8%), granulomas (78; 25.8%), and hernias (72; 23.8%). Characteristics related to self-care, adaptation, self-efficacy, and technologies used in ostomy care were as follows: most participants informed other people, in addition to their partners and family members, about their ostomy creation (191; 63.2%); reported being adapted to their ostomy (220; 72.8%); and performed self-care (204; 67.5%), although they reported limitations (204; 67.5%). The mean duration of adhesive baseplate

Table 4. Main non-dermatological complications, mplications, characteristics related to self-care, adaptation, technologies used in ostomy care, Aracaju (SE), 2024.

Variables		PSC during the previous six months				Total (n=302)		p-value
		Yes (n=201)		No (n=101)				
		n	%	n	%	n	%	
Peristomal hernia	Yes	46	63.9	26	36.1	72	23.8	0.583
	No	155	67.4	75	32.6	230	76.2	
Granuloma	Yes	63	80.8	15	19.2	78	25.8	0.002
	No	138	61.6	86	38.4	224	74.2	
Allergy to ostomy appliances or accessories	Yes	62	73.8	22	26.2	84	27.8	0.097
	No	139	63.8	79	36.2	218	72.2	
Shares information about the ostomy with others	Yes	123	64.4	68	35.6	191	63.2	0.097
	No	78	70.3	33	29.7	111	36.8	
Feels adapted to the ostomy	Yes	135	61.4	85	38.6	220	72.8	0.002
	No	66	80.5	16	19.5	82	27.2	
Feels limited in activities performed before the ostomy	Yes	147	72.1	57	27.9	204	67.5	0.003
	No	54	55.1	44	44.9	98	32.5	
Average time the barrier remains on the skin (days)	≤3	144	66.1	74	33.9	218	72.2	0.766
	>3	57	67.9	27	32.1	84	27.8	
Has leakage of effluents onto clothing	Yes	132	72.1	51	27.9	183	60.6	0.011
	No	69	58.0	50	42.0	119	39.4	
Uses adjuncts	Yes	160	69.6	70	30.4	230	76.2	0.048
	No	41	56.9	31	43.1	72	23.8	
Protective powder	Yes	137	74.1	48	25.9	185	61.3	0.001
	No	64	54.7	53	45.3	117	38.7	
Hydrocolloid paste	Yes	87	77.7	25	22.3	112	37.1	0.002
	No	114	60.0	76	40.0	190	62.9	

PSC: Peristomal skin complications.

Source: The authors.

wear was ≤3 days (218; 72.2%); most participants used accessories (230; 76.2%), including protective powder (185; 61.3%) and hydrocolloid paste (112; 37.1%); and reported experiencing effluent leakage onto their clothing (183; 60.6%).

In this study, 35 variables met the statistical criterion of $p < 0.20$ for inclusion in the multivariable analysis. However, in the final model, only three variables were independently associated with peristomal skin complications: age, adaptation to the ostomy, and physical activity. Being older than 50 years (aPR 0.79; 95% CI 0.68–0.92; $p = 0.002$), being adapted to the ostomy (aPR 0.79; 95% CI 0.68–0.92; $p = 0.003$), and engaging in physical activity (aPR 0.79; 95% CI 0.65–0.96; $p = 0.020$) were associated with a 21% lower prevalence of the outcome of interest (Table 5).

DISCUSSION

Peristomal skin complications are responsible for a substantial individual and social burden due to their negative impact on the quality of life of people with ostomies. Worldwide, these complications have been investigated; however, this was one of the few studies conducted in a specialized rehabilitation service in northeastern Brazil. The study identified a prevalence of peristomal skin complications of 66.5% during the period analyzed and found that age, adaptation to the ostomy, and engagement in physical activity were protective factors.

Table 5. Factors independently associated with peristomal skin complications in people with elimination ostomies in the past six months, Aracaju (SE), 2024.

Variables	β	aPR	95% CI		p-value
			Lower	Upper	
Intercept	-0.044	0.96	0.85	1.08	0.487
>50 years	-0.230	0.79	0.68	0.92	0.002
Adapted to the ostomy	-0.235	0.79	0.68	0.92	0.003
Engaging in regular physical activity	-0.230	0.79	0.65	0.96	0.020

Omnibus test ($\chi^2(3)=7.877$; p-value=0.049).

Deviance: 155.786; AIC: 565.786; Bayesian Information Criterion (BIC): 580.627.

Source: The authors.

The choice to estimate period prevalence rather than point prevalence was based on the consideration that this measure has a greater ability to capture short-duration health events¹³. Since skin lesions may occur throughout the lifetime of a person with an ostomy, point prevalence could underestimate the outcome of interest by providing only a snapshot of the condition.

The prevalence of peristomal skin complications found in this study is similar to that reported in the literature. A study conducted with 325 participants at a specialized care center for people with ostomies in the state of São Paulo found an overall frequency of 54.8% for these outcomes¹⁴. Contact dermatitis is a very common postoperative complication, with an estimated prevalence ranging from 36.3% to 73.4%, according to a systematic review that included 23 international studies¹⁰.

The socioeconomic and demographic characteristics of the sample, such as female sex, low educational attainment, non-White skin color, and family income ≥ 1 minimum wage, reflect characteristics identified in the National Household Sample Survey. In this study, women represented 52.1% of the total population, only 23.4% of the sample identified as White, the average usual monthly income was slightly more than one minimum wage for both sexes, and 14.09% of the population could neither read nor write¹⁵.

It is important to note that, although most participants had a partner, the presence of an ostomy negatively affected their sexuality. This interference may be more significant among younger and single individuals compared with older people and those with partners. By affecting self-esteem and body image, the ostomy and its complications may lead young and single individuals to reduce their pursuit of new partners¹⁶.

Participants also reported feelings of overcoming adversity and rated their health status as good or excellent, even after experiencing a challenging diagnosis marked by taboos, followed by emergency surgical treatment, chemotherapy, radiotherapy, and living with an ostomy. Other findings of the present study included healthy lifestyle habits, such as not smoking or consuming alcohol, as well as engaging in spiritual practices and leisure activities, which are beneficial to physical and mental health and contribute to recovery and adaptation to the ostomy^{16,17}.

Spirituality, present in 92.1% of participants, may have played a relevant role in their positive perception of their reported health status. Evidence indicates that spirituality helps individuals cope with challenges and develop resilience, encourages self-care, and promotes adaptive processes, even in adverse circumstances¹⁸.

Leisure activities were frequently reported by the participants. However, engaging in water-based activities, such as going to the beach or swimming pool, was a challenge. Reasons for this limitation may include emotional concerns, such as an increasing sense of shame related to the mutilating procedure, insecurity about exposing the ostomy appliance in public settings, and practical concerns, such as the possibility of the device losing adhesion, leaking, or becoming detached during immersion in water¹⁹.

Although most participants reported engaging in leisure activities, adherence to regular physical activity was low. Nevertheless, physical activity was significantly associated with a lower prevalence of complications. Evidence indicates an inversely proportional and statistically significant association between the level of physical activity and the development of parastomal hernia. This complication is clinically significant, causes skin deformity and increases the risk of dermatitis,

and occurs in approximately 29.7% of patients with permanent ostomies, with variations according to the type of diversion (colostomies having the highest rates, at 40%)²⁰.

National data indicate that 45.9% of the Brazilian population is physically inactive²¹. The available evidence differs from the finding that physical activity is a protective factor against the risk of dermatitis^{22,23}. However, it suggests that physical activity improves quality of life and overall health and reduces the risk of developing depression²⁴.

Frequent physical activity may increase sweating and friction between the ostomy appliance and the skin and, consequently, lead to greater irritation and episodes of effluent leakage. For this reason, it has been associated with higher levels of maceration, infections, and dermatitis^{24,25}. However, people with ostomies who are less physically active also have lower quality-of-life scores²⁵. In a study involving more than 88,000 individuals, those who engaged in physical activity during their leisure time were less likely to experience depressive symptoms²⁴. This practice should be encouraged among patients with ostomies, as in other populations, because of its benefits in promoting overall health, preventing and managing depressive symptoms, and strengthening social interaction.

Most participants reported feeling limited in performing activities they had engaged in before ostomy creation, particularly those requiring physical exertion or heavy lifting. Nevertheless, more than two-thirds of the participants reported being adapted to their new condition, and this adaptation was associated with a lower prevalence of peristomal skin complications. This finding is consistent with a study conducted in Rio de Janeiro, in which a substantial proportion of individuals with complications were found to be less adapted to their ostomy²⁶.

Adaptation, acceptance, and self-care do not necessarily occur simultaneously. Some participants reported being adapted to their ostomy but still did not perform self-care, leaving this responsibility to their partner because the ostomy was considered temporary. However, they stated that if the ostomy were permanent, they would already be performing self-care. This finding is consistent with studies in which adaptation to an ostomy was associated with longer ostomy duration, self-care, and permanent ostomies²⁷. Adaptation and self-care should be the focus of care regardless of the type of ostomy, as self-care is associated with greater freedom and autonomy. Conversely, complete dependence on a caregiver may increase the risk of complications²³.

Age over 50 years was also associated with a lower prevalence of peristomal skin complications. A study conducted in Switzerland that followed patients for 30 days postoperatively found that patients older than 70 years were less likely to experience persistent complications²³. In Italy, a study aimed at developing a risk profile for complications found that individuals older than 75 years had a lower risk of complications such as itching or xerosis, which could be associated with reduced skin sensitivity and may contribute to lower reporting of these symptoms²⁸.

A concerning finding is that only one-third of the participants felt confident at the time of hospital discharge. This finding is alarming and highlights an area that needs to be substantially addressed by stomatherapy nursing, as there is a need for a robust discharge plan that informs patients about the location of the specialized healthcare service for people with ostomies, where they can obtain supplies and receive follow-up care from a multidisciplinary team.

In addition, patients and family members need to acquire the necessary knowledge early on to manage care at home, with the aim of promoting better adaptation and preventing complications. This preparation can be optimized through structured and continuous hospital discharge models, such as a randomized clinical trial conducted in China with 153 participants²⁹.

This study demonstrated that a nurse-led discharge plan with continuous informational support from admission through three months after discharge was able to improve quality of life and significantly reduce complications and unplanned hospital readmissions²⁹.

This successful experience supports the implementation of perioperative educational interventions based on safe guidance and longitudinal follow-up, establishing nursing as a key determinant of a safe transition of care.

Within this context of follow-up and support, the relevance of consultation with a stomatherapy nurse should be emphasized. This professional ensures the early diagnosis and appropriate treatment of skin lesions, directly addressing a common behavior in clinical practice: many people with ostomies believe that skin changes are part of a “new normal”³⁰. Therefore, the presence of complications should not be normalized but rather prevented and treated through specialized care.

Study Limitations

This study had some limitations: it was conducted at a single center, and the low educational attainment of the study population made it difficult for some participants to understand the questionnaire. Another limitation was the potential for recall bias among participants, which may have affected the accuracy of the data collected. Because information on complications was obtained through interviews, participants' ability to recall past events may have resulted in underreporting of dermatological complications. Despite these limitations, the findings are expected to contribute to advancing knowledge in the field and to the continuous improvement of healthcare services by providing scientific evidence to support nurses in planning care for people with ostomies and reducing the impact on public health.

Recommendations

Due to the cross-sectional design of this study, causal relationships between the variables investigated cannot be established. Future studies should adopt a longitudinal design to enable the analysis of cause-and-effect relationships, as well as a more detailed classification of dermatitis and its clinical progression.

CONCLUSION

Self-reported peristomal skin complications during the previous six months were present in two-thirds of the sample. The prevalence of the outcome was significantly lower among people older than 50 years, those who reported being adapted to their ostomy, and those who engaged in physical activity.

Identifying the prevalence and predictors associated with peristomal complications provides evidence to support the planning of nursing interventions. These findings reinforce the need for consultations with a stomatherapy nurse beginning with preoperative stoma site marking, including educational strategies focused on self-care, with the aim of reducing knowledge gaps at the time of hospital discharge and promoting effective adaptation to the ostomy.

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